SOCIUS ENGG. TECH. PVT. LTD.

AN ISO 9001: 2015, MSME. CERTIFIED COMPANY

Name of work: Improvements to Asphalting to Roads and Drains at Best County, AmbaBhavaniNagara, AmbaBhavani Layout, Prakruthi Layout and Surrounding Areas ward No-03 of Yelahanka division (Package No- 06)

Name of the Agency:- Sri N. K. Shankar , M/s I S Infrastructure

Bill No:- 2nd and Final Bill

Work Order No:- BBMP/EE/YNK/E-PMT-No.-5/W.O/ 178 /2020-21

Agreement No:- BBMP/EE/YNK/E-PMT-NO -5/AG/ 149 /2020-21

Head of Account : P-3075

Tender approved Amount :Rs. 5,78,30,636/-

Job Code:- 003-21-000047

CERTIFICATE

BOQ SlNo	Description of the Item	Comments/Observation
1	KSRRB 300-1. Earthwork excavation by manual means for roads, drains & similar works in ordinary soil excavated surface levelled and sides neatly dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specifications (I No-19.1,P No-141), 10km lead = (1.28x2x10)+57.	Work done up to the billed quantity and quantity is satisfactory
2	KSRRB M2900-1. Plain cement concrete 1:3:6 mix with crushed stone aggregate 40 m nominal size mechanically mixed, placed in foundation and compacted by vibration including curing complete as per specifications MORTH Specification No. 408 KPWD S.R 2018-19 Page No. 254 I.No. 34.1	Work done up to the billed quantity and quantity is satisfactory
3	Providing and laying plain/reinforced cement concrete for side drains using M20 nominal mix concrete with OPC at 300 kgs. with 20mm and down size granite metal coarse aggregates at 0.69 cum and fine aggregates at 0.43 cum machine mixed, well compacted for walls per MORTH specification No. 1500, 1700, 2200. including cost of materials, labour, HOM complete as per specifications.Wall& bottom thickness 15cm KPWD S.R 2018-19 Page No. 271 I.No. 37.59.2and bottom including centering, shuttering, cost of materials, HOM of machinery, curing etc., complete excluding cost of steel as	Work and quantity is satisfactory done up to the billed quantity
4	KSRRB M2200-6. Providing T.M.T. steel reinforcement for R.C.C. work including straightening, cutting, bending, hooking, placing in position, lapping and/or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per disign (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM complete as per specification. MORTH Specification No.1600 & 2200(I No-28.8.2,P No-229)	Work done up to the billed quantity and quantity is satisfactory

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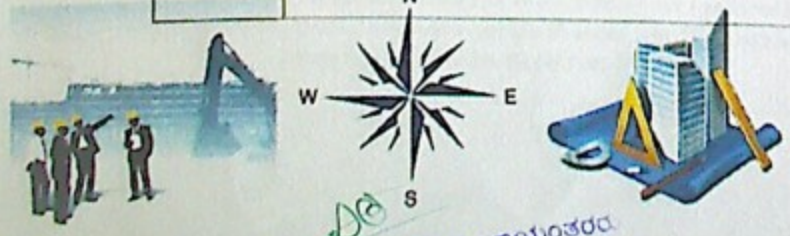

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BOQ Sl No	Description of the Item	Comments/Observation
5	Providing & laying precast drain cover slab of 100 mm thickness in CM 1:3 including cost of all materials, labour, curing, transportation, loading, unloading etc, complete as per the directions of the Engineer In Charge.(0.9 x 0.60 x 0.1)Data rate	Work done up to the billed quantity and quantity is satisfactory
6	Providing & laying precast drain cover slab of 250 mm thickness in CM 1:3 including cost of all materials, labour, curing, transportation, loading, unloading etc, complete as per the directions of the Engineer In Charge.(1.2 x 0.60 x 0.25)Data rate	Work done up to the billed quantity and quantity is satisfactory
7	Providing and fixing pre cast solid cement concrete kerb stones made out of CC 1:2:4 with top and bottom width 114 and 165 mm respectively, 400mm high and 450mm in length finished with CM 1:3 plastering and finishing cutting including formwork, curing, including cost of materials, labour charges of machinery, loading and unloading, lead and lift, transportation ete.,complete. As per the direction of Engineer incharge. (P.No.27, I.No.5.30 of PW, P&IWTD SR 2018-19)	Work done up to the billed quantity and quantity is satisfactory
8	KSRRB M300-14. Excavation for roadwork in all types of soil with hydraulic excavator of 0.9 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to the embankment location to a lead of 1.00 km and complete as per specifications. MORTH Specification No.301(pg no-143,S.Lno-19.14)KPWD S.R 2018-19	Work done up to the billed quantity and quantity is satisfactory
9	KSRRB 300-58. Compaction of original ground with maximum of 6 passes of 8 to 10 tonnes power roller including filling in depression occuring during rolling including cost of all labour, HOM of machinery complete as per specifications. MORTH / Chapter 3 (I No-19.64,P No-147)	Work done up to the billed quantity and quantity is satisfactory
10	Construction of granular sub-base Grading-V as sub-base and drainage layer by providing coarse graded crushed stone aggregates of granite/trap/basalt material, mixing in a mechanical mix plant at OMC, carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the 98% proctor density, complete as per specifications.Clause 401 of MORTH V Revision. Page No. 153/ Item No. 20.5/ PWD SR 2018-19202.(I No-18.47,P No-140) 10km lead = (1.28x2x10)	Work done up to the billed quantity and quantity is satisfactory
11	KSRRB M400-17. Providing, laying, spreading and compacting crushed stone aggregates of granite / trap / basalt to wet mix macadam specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed method of tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications. MORTH Specification No. 406 Page No. 157/ Item No. 20.18/ PWD SR 2018-19	Work done up to the billed quantity and quantity is satisfactory

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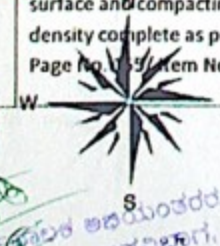

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12	Painting two coats after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete with all lead and lift as per the direction of engineer-in-charge	Work done up to the billed quantity and quantity is satisfactory
13	KSRRB M300-14. Excavation for roadwork in all types of soil with hydraulic excavator of 0.9 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to the embankment location to a lead of 1.00 km and complete as per specifications. MORTH Specification No.301(pg no-143,S.Lno-19 14)KPWD S.R 2018-19	Work done up to the billed quantity and quantity is satisfactory
14	KSRRB 300-58. Compaction of original ground with maximum of 6 passes of 8 to 10 tonnes power roller including filling in depression occuring during rolling including cost of all labour, HOM of machinery complete as per specifications. MORTH / Chapter 3 (I No-19 64,P No-147)	Work done up to the billed quantity and quantity is satisfactory
15	Construction of granular sub-base Grading-V as sub-base and drainage layer by providing coarse graded crushed stone aggregates of granite/trap/basalt material, mixing in a mechanical mix plant at OMC, carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the 98% proctor density, complete as per specifications.Clause 401 of MORTH V Revision. Page No. 153/ Item No. 20 5/ PWD SR 2018-19	Work done up to the billed quantity and quantity is satisfactory
16	KSRRB M400-17. Providing, laying, spreading and compacting crushed stone aggregates of granite / trap / basalt to wet mix macadam specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed method of tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications. MORTH Specification No. 406 Page No. 155/ Item No. 20 18/ PWD SR 2018-19	Work done up to the billed quantity and quantity is satisfactory
17	Providing and applying primer coat with S.S. bitumen emulsion on prepared surface of granular base such as WMM ,including clearing of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per Specifications. MORTH Specification No. 502 Complete with all lead and lift and as per the direction of the Engineer-in-Charge.	Work done up to the billed quantity and quantity is satisfactory
18	Providing and laying dense graded bituminous macadam using crushed aggregates of specified grading, premixed with VG30 grade bituminous binder and, transporting the hot mix to work site, laying to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH table 500-10 complete in all respects complete as per specifications. Clause 505 of morth V revision using 40/60 TPH capacity H.M.P with mechanical paver Gr-II (50mm to 75mm) with 4.5% VG-30 Bitumen. Complete with all lead and lift as per the direction of engineer-in-charge	Work done up to the billed quantity and quantity is satisfactory

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19	Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatment including cost of all materials, labour, HOM of machineries complete with all lead and lift as per the direction of engineer-in-charge	Work done up to the billed quantity and quantity is satisfactory
20	Providing and applying tack coat using 80/100 grade bitumen(VG10) on the prepared black topped surfaces at 2.5 kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete with all lead and lift as per the direction of engineer-in-charge	Work done up to the billed quantity and quantity is satisfactory
21	Providing and laying bituminous concrete using crushed aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications. Clause 507 of MORTH V revision. -using40/60 TPH capacity H.M.P. with Mechanical Paver Gr-II (30 mm to 40 mm) with 5.4% VG-30 Bitumen complete with all lead and lift as per the direction of engineer-in-charge	Work done up to the billed quantity and quantity is satisfactory
22	Road Marking with Hot Applied Thermoplastic Compound with Reflectrising Glass Beads on Bituminous Surface - Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete with all lead and lift as per the direction of engineer-in-charge	Work done up to the billed quantity and quantity is satisfactory

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